

Jakub Kováč

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Employment

- October 2013–present Software Engineer at *Facebook Inc., London*
- June–August Software Engineer Intern at *Facebook Inc., London*
2013 developed a code coverage tool for Android applications;
- June–August Software Engineer Intern at *Facebook Inc., California*
2012 developed a NetFlow collector for network traffic monitoring;

Education

- 2009–2013 *Comenius University*, PhD in bioinformatics
Thesis: *Algorithms for Genome Rearrangements*; Advisor: Mgr. Tomáš Vinař PhD.
- October 2011 research fellowship at *Ottawa University, Canada*
–April 2012
- March–June 2010 research fellowship at *Bielefeld University, Germany*
- 2007–2009 *Comenius University*, Master's degree in Computer Science
Thesis: *Gene Finding Using RT-PCR Tests*
Advisors: Mgr. Broňa Brejová PhD., Mgr. Tomáš Vinař PhD.
- 2004–2007 *Comenius University*, Bachelor's degree in computer science
Thesis: *Tree Data Structures and their Visualisation*
Advisor: RNDr. Jana Katreniaková PhD.
- 2002–2004 *International Baccalaureate* at *Gymnázium Jura Hronca*,
Diploma awarded

Software

- PIVO software for reconstruction of ancestral gene-orders (<http://compbio.fmph.uniba.sk/pivo/>)
- Gnarley trees visualization of tree data structures (<http://people.ksp.sk/~kuko/gnarley-trees/>)

Activities

- 2005–2006, *Internet Problem Solving Contest* (ipsc.ksp.sk)
- 2009–2011 an organizer of one of the most influential annual online programming contests (1306 teams from all of the world participated in 2012)
- 2004–present *KSP – Correspondence Seminar in Programming* (www.ksp.sk)
organizing programming competitions, preparation of camps, lecturing for talented high school students and preparing them for programming contests

Awards

- 2011, 2013 Grant for Young Researchers from Comenius University
- 2011 Stipend for research visit on University Ottawa
- 2010 Partnerschaftsstipendien stipend from Bielefeld University
- 2009 3rd place at Czechoslovak Student Science Conference and Dean's award for the work
Gene Finding Using RT-PCR Tests
- 2009 Dean's award for academic excellence
- 2003 5th place at Slovak Olympiad in Informatics, represented Slovakia at Central European Olympiad in Informatics in Germany

Publications

Journal articles

- [K13a] Jakub Kováč, *On the Complexity of Rearrangement Problems under the Breakpoint Distance*, accepted to Journal of Computational Biology.
- [K13b] Jakub Kováč, *Complexity of the path avoiding forbidden pairs problem revisited*, Discrete Applied Mathematics, January 2013. doi:10.1016/j.dam.2012.12.022.
- [KWBS11] Jakub Kováč, Robert Warren, Marília D. V. Braga, Jens Stoye, *Restricted DCJ Model: Rearrangement Problems with Chromosome Reincorporation*, Journal of Computational Biology, September 2011, 18(9): 1231-1241.
- [VFF⁺11] Matúš Valach, Zoltán Farkaš, Dominika Fricová, Jakub Kováč, Broňa Brejová, Tomáš Vinař, Ilona Pfeiffer, Judit Kucsera, Lubomír Tomáška, Franz B. Lang, Jozef Nosek, *Evolution of linear chromosomes and multipartite genomes in yeast mitochondria*, Nucleic Acids Research, May 2011, 39(10): 4202-19.

Conference articles

- [JZKS13] Katharina Jahn, Chunfang Zheng, Jakub Kováč, David Sankoff, *A consolidation algorithm for genomes fractionated after higher order polyploidization*, BMC Bioinformatics, 13(Suppl 19), S8.
- [KKB11] Marcel Kucharík, Jakub Kováč, Bronislava Brejová, *Gene Finding with Complex External Information*, In Proc. ITAT 2011. Best paper award.
- [KBV11] Jakub Kováč, Broňa Brejová, Tomáš Vinař, *A Practical Algorithm for Ancestral Rearrangement Reconstruction*, In Proc. WABI 2011, pp. 163–174.
- [KBS10] Jakub Kováč, Marília D. V. Braga, Jens Stoye, *The Problem of Chromosome Reincorporation in DCJ Sorting and Halving*, In Proc. RECOMB-CG 2010, pp. 13–24.
- [KBV09] Jakub Kováč, Broňa Brejová, Tomáš Vinař, *Predicting Gene Structures from Multiple RT-PCR Tests*, In Proc. WABI 2009, pp. 181–193.

Editorial work

- [FKS⁺11] Michal Forišek, Jakub Kováč, Monika Steinová, Peter Fulla, Vladimír Boža, Michal Nánási, *Zbierka riešených úloh Korešpondenčného seminára z programovania (1998–2006; Solved Problems from Correspondence Seminar in Programming)*, Okat Plus, spol. s r. o., Bratislava, 2011, ISBN 978-80-88720-16-4.
- [FK08] Michal Forišek, Jakub Kováč, *Dvadsiaty druhý ročník Olympiády v informatike (22nd Olympiad in Informatics)*, Iuventa, Bratislava, 2008, ISBN 80-8072-053-3.
- [FK06] Michal Forišek, Jakub Kováč, *Zbierka riešených úloh Korešpondenčného seminára z programovania (1983–1998; Solved Problems from Correspondence Seminar in Programming)*, Okat Plus, spol. s r. o., Bratislava, 2006, ISBN 80-88720-09-5.

Theses

- [Kov09] Jakub Kováč, *Gene Finding Using RT-PCR Tests*, Master's thesis, Comenius University, Bratislava. Advisors: Broňa Brejová, Tomáš Vinař
- [Kov07] Jakub Kováč, *Vyhľadávacie stromy a ich vizualizácia (Tree Data Structures and their Visualisation)*, Bachelor's thesis, Comenius University, Bratislava, 2007. Advisor: Jana Katreniaková

Other

- [Kov10] Jakub Kováč, *DNA vyhynutých druhov (DNA of the extinct species)*, published in .týždeň magazine; 12/2010

Teaching experience

2013 teaching the course *Randomized Algorithms*

2006–2013 teaching assistant for the courses *Formal Languages and Automata I, II*, *Introduction to Discrete Mathematics*, *Introduction to Combinatorics and Graph Theory*, *Introduction to Mathematical Logic* and *Semestral Projects*

2004–2009 teaching *Computer Science* at high school Gymnázium Jura Hronca

Skills

languages – proficient English, native Slovak, basic German

programming – years of experience with Python and C-based languages (Java, C++, PHP);
revision control systems (git, mercurial, svn); typesetting in T_EX and L^AT_EX